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CALTRANS REGIONAL OPERATIONS FORUMS

District 10

Review of Capability Self Evaluations

Background – The Challenge

Transportation Systems Management & Operations (TSM&O) is:

"An **integrated** program to **optimize** the performance of existing roadway infrastructure…..

Specific **coordinated systems and services**…….

Preserve capacity, improve **reliability and safety**, and enhance the environment."

The Challenges/Opportunities for TSM&O

- Challenges
  - Congestion and delay
  - High value placed on reliability
  - Existing TSM&O: unsystematic, “pockets of excellence”

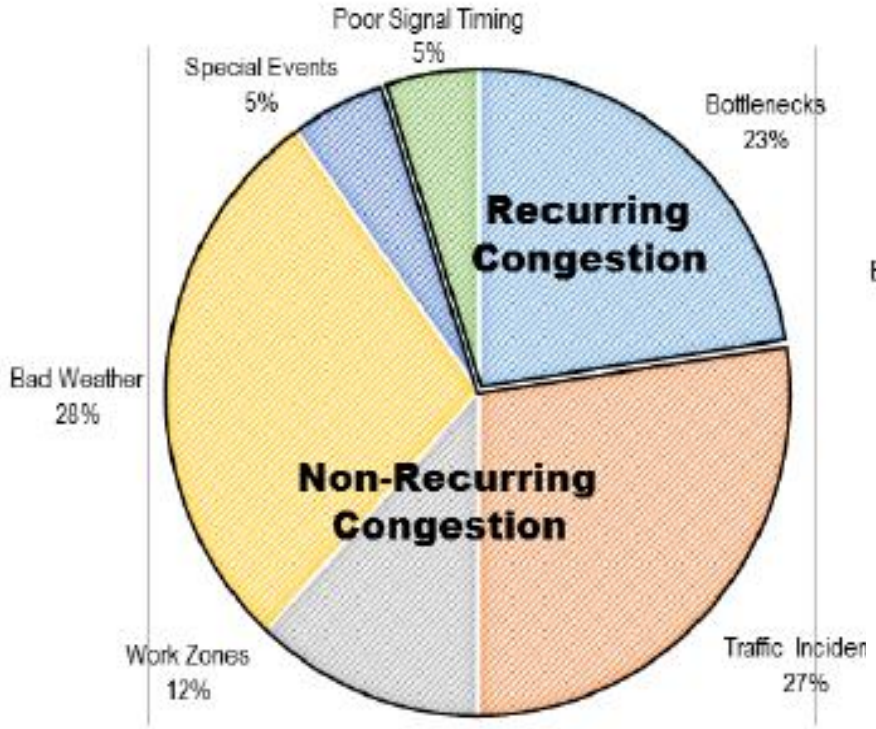
- Opportunities
  - Unexploited potential of aggressive, integrated, collaborative TSM&O applied to existing roadways

This Module

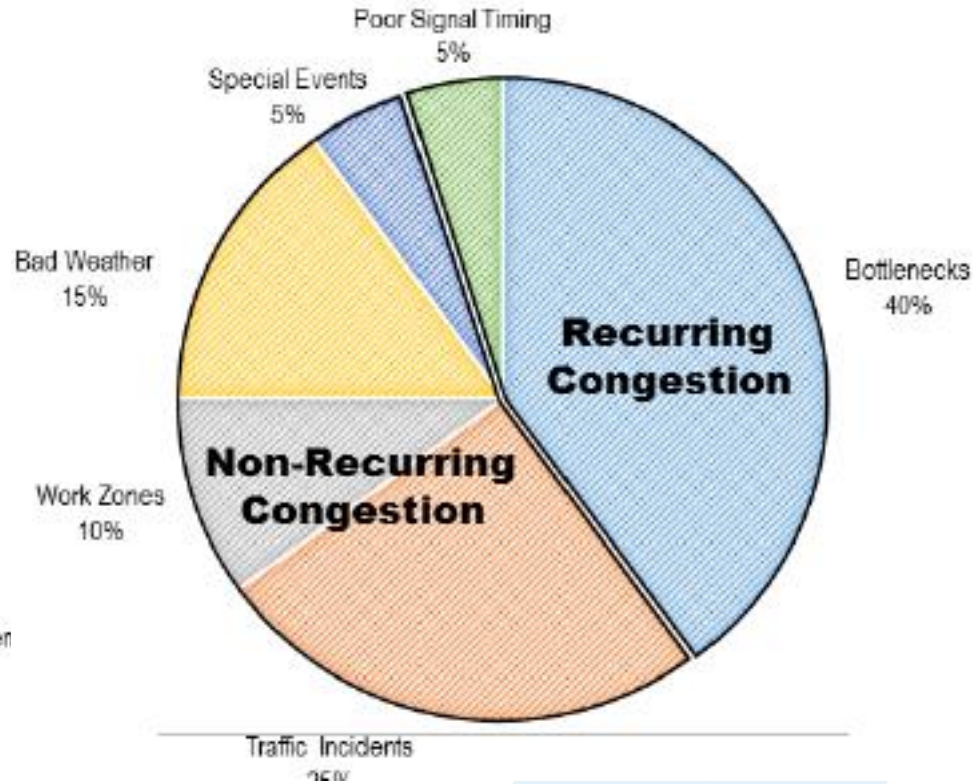
- State of play in effectiveness and room for improvement
- Agency capabilities that determine effectiveness
- Levels of capability towards capability for continuous improvement
- The Capability Maturity tool (CMM) in concept
- How CMM self-assessment is applied
- Self assessments of ROF attendees re their agency
- Use of CMM in your Team Exercise

Focus of TSM&O Planning
Causes of Congestion– Metro vs Rural

More Rural State



Metro Areas



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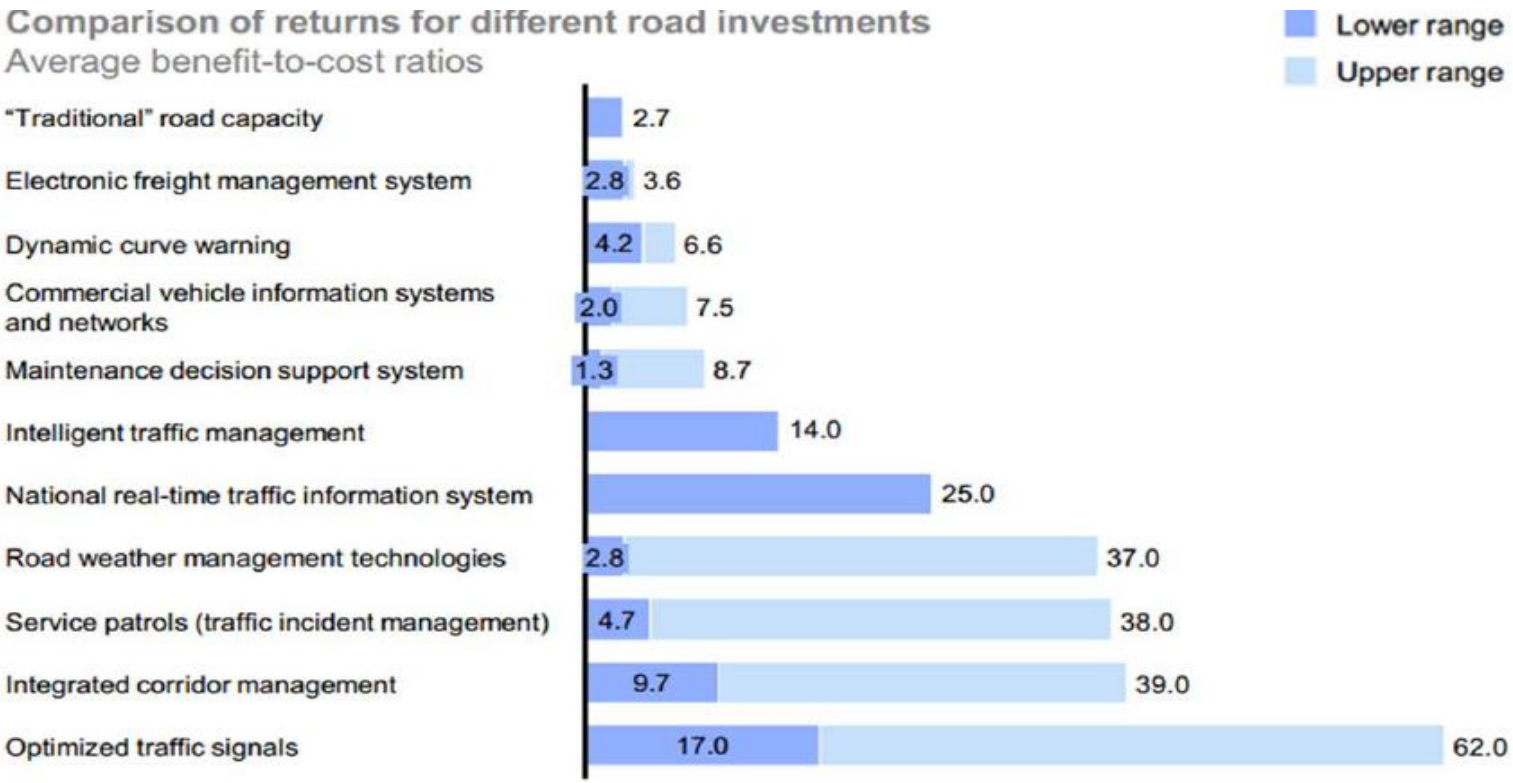
New Mandala 2008
Nicholas Farrelly
K.I.A.

Background – “Solutions”

Effective Application Potential

TSM&O Strategies	Potential Delay Reduction
Flow Control/Ramp Metering	7-8%
Traffic Responsive Signals	12-12%
Incident Management	10-15%
Work Zone Traffic Management	3-4%
Weather Information	2-3%
Traveler Information	1-3%
Active Traffic Management	15%
Pricing	20%

TSM&O Has High B/C



SOURCE: *Intelligent transportation systems*, Capitol Research, Council of State Governments, April 2010; Transport for London, 2007; *Intelligent transportation systems benefits, costs, deployment, and lessons learned desk reference: 2011 update*, US Department of Transportation, September 2011; *Urban mobility plan*, Seattle Department of Transportation, January 2008; McKinsey Global Institute analysis

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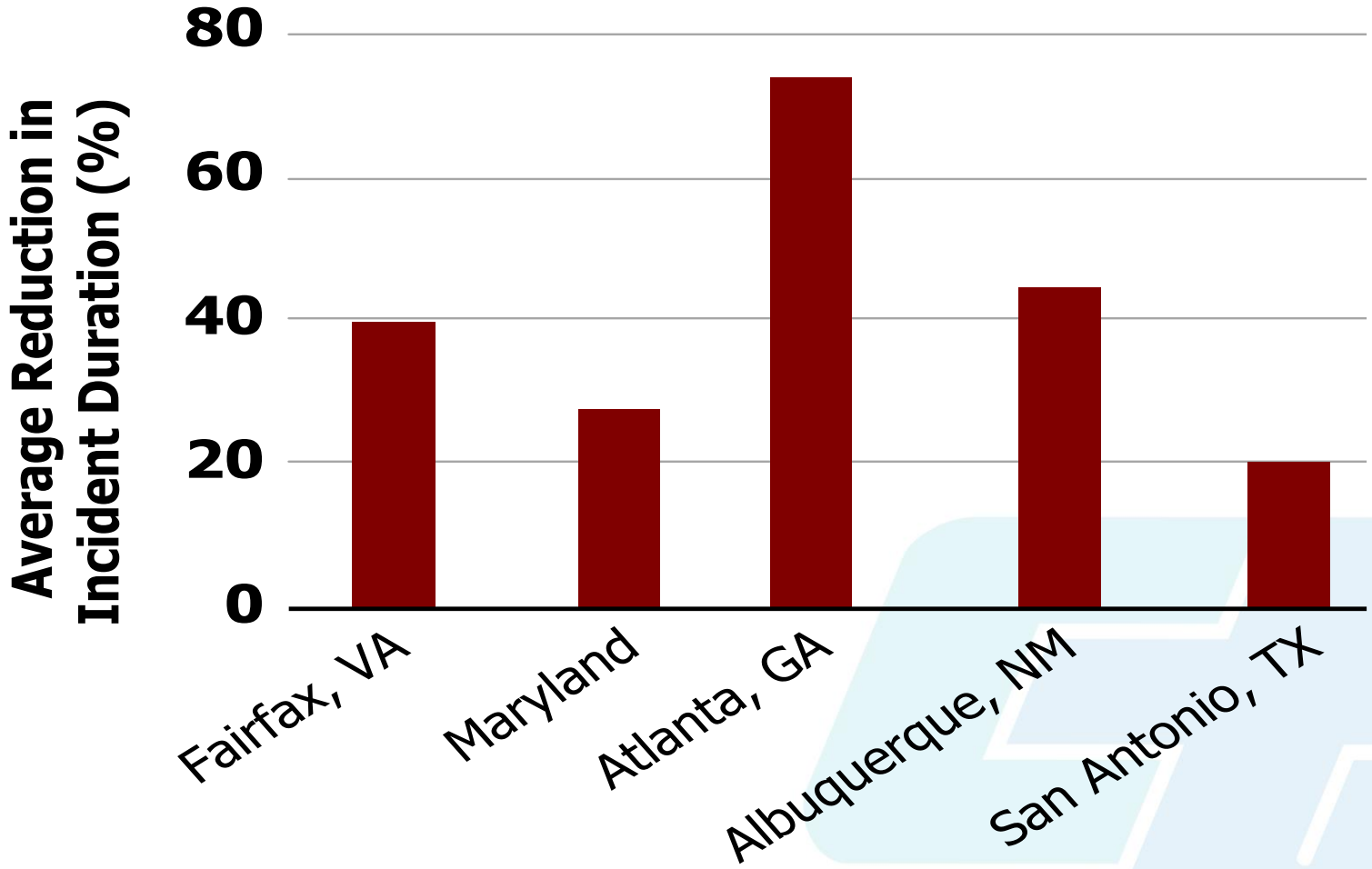
Message

- Much of delay and most of unreliability from NRC
- One or more TSM&O strategies for each cause of NRC
- Strategies are cheap, quick, and non-disruptive
- States vary widely in TSM&O Applications Effectiveness”

Differences in Achievement?



Discussion

- What accounts for differences? (not traffic, resources)

Widely Varying State of the Practice

QUICK CLEARANCE AND RECOVERY STRATEGIES	Abandoned Vehicle Hazards	Lengthy Minor Incident Clearance	Lengthy Major Incident Clearance	Liability Concerns	EXAMPLE APPLICATIONS
Abandoned Vehicle Legislation/Policy	●				21+ U.S. Metropolitan Areas, IN, NC
Safe, Quick Clearance Laws—*Driver Removal*		●			~25 States, including FL, GA, MD, NC, OH, SC, TN, TX, VA, WI
Service Patrols		●			130+ U.S. Metropolitan Areas, AZ (Phoenix), CA, FL, GA (Atlanta), IN, MD, MN, NM (Albuquerque), OR, TN, UT (Salt Lake City)
Vehicle-Mounted Push Bumpers		●			CA (Redding, Stockton), MD (Baltimore), NJ/PA (Delaware Valley Region), OH (Cincinnati), TN (Chattanooga), TX (Austin), UT (Salt Lake City)
Incident Investigation Sites		●			16+ U.S. Metropolitan Areas, TX (Houston)
Safe, Quick Clearance Laws—*Authority Removal*		●	●	●	AZ, CA, CO, FL, GA, IL, IN, KY, MO, NM, NC, OH, OR, SC, TN, TX, VA, WA
Quick Clearance/Open Roads Policy		●	●		35+ U.S. Metropolitan Areas, CA, FL, GA, ID, IN, LA, MD, NV, NH, TN, UT, WA, WI
Non-cargo Vehicle Fluid Discharge Policy		●	●		FL, MN
Fatality Certification/Removal Policy			●		PA, TN, TX (Austin), WA
Expedited Crash Investigation			●		93+ U.S. Metropolitan Areas, FL, IN, TX (North Central Region), UT
Quick Clearance Using Fire Apparatus			●		TX (Austin)
Towing and Recovery Quick Clearance Incentives			●		FL, GA, WA
Major Incident Response Teams			●		DE, FL, IL (Chicago), LA, MD, NJ, OH (Cincinnati, Columbus), NY, TX (Dallas Co.), WA

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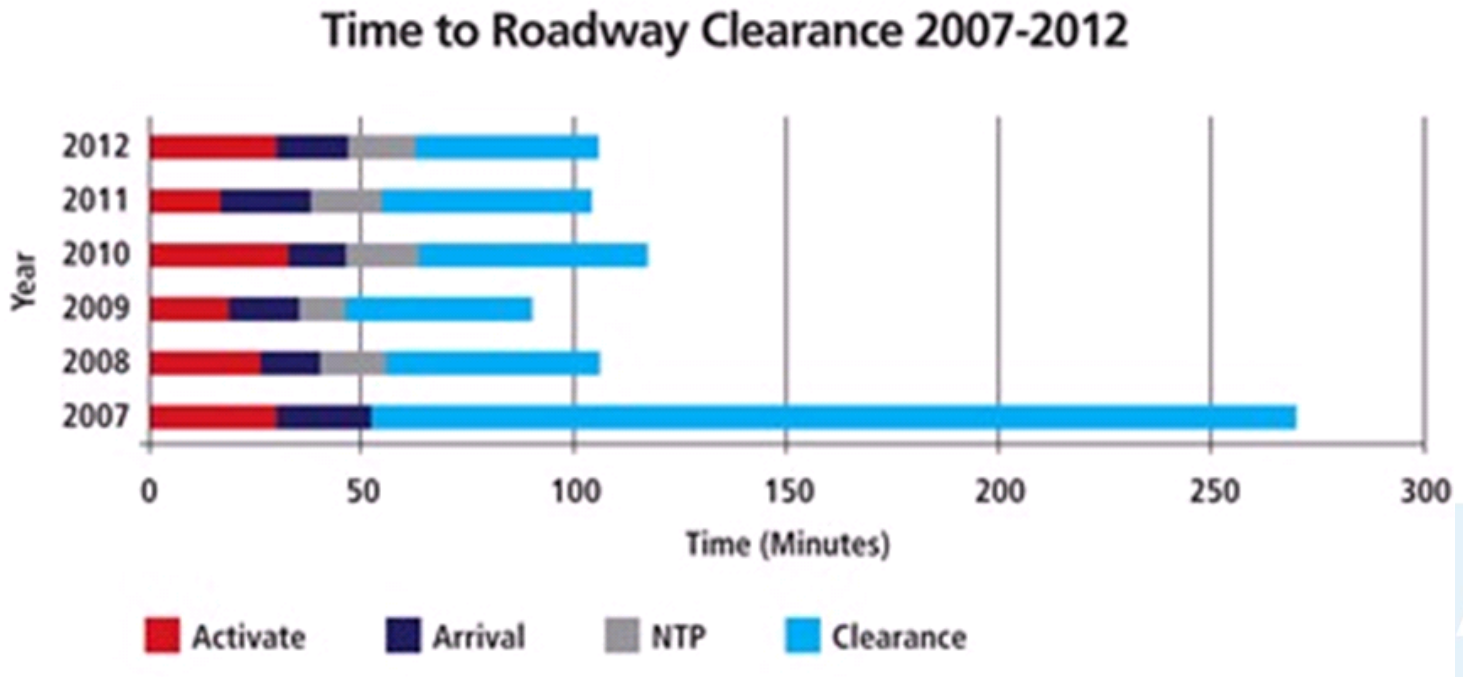
Dramatic Change Not Expensive



Time to Roadway Clearance 2007-2012

The Capability Maturity Model (CMM) Process

What are “Capabilities”

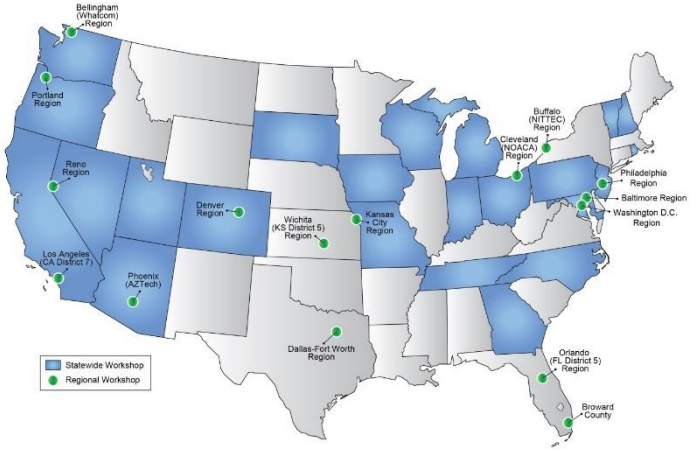
- Not just infrastructural systems
- Not just staff technical capacities (KSAs)

But -- at the entity level (agency):

- Values and norms supporting working towards common objectives
- Sustainable resources ($, staffing)
- Technical and managerial systems
- Institutional configurations (internal, external)

All the factors that promote *continuous* improvement

Capability Maturity Research and Workshops

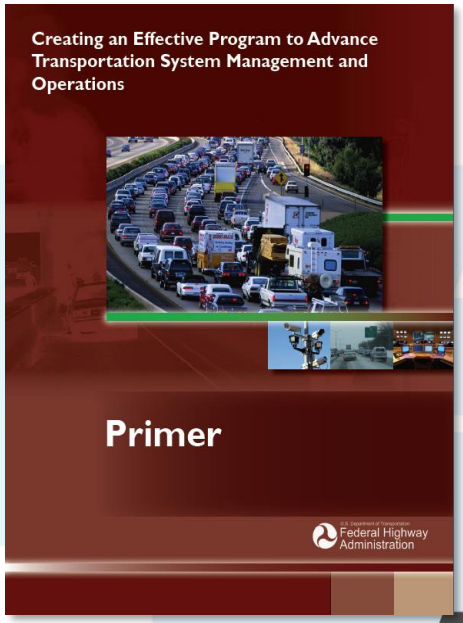


Objective: “Mainstreaming” continuous improvement

Research Findings: Key differentiators **not** how much ITS – but processes and institutional arrangements that support improvement

Workshop Process: Agency staff evaluate capabilities and improvement implementation plans

Validation: 45 FHWA-sponsored state DOT and regional workshops nationwide



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TSM&O – More than ITS – Systems and Technology